MODIS sensor Working Group (MsWG) Meeting Summary Dec. 10, 2008

Attendance: Gary Toller, Bill Barnes, Aisheng Wu, Junqiang Sun, Gerhard Meister, Gene Eplee, Vince Salomonson, Ben Ripman, Hongda Chen, James Kuyper, Chris Moeller, Jack Xiong, Brian Wenny

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Scheduled Agenda

Item 1: Recent L1B LUT delivery

- Terra forward update – 5.0.40.13 (11/25/08) – m1, RVS & dn_sat_ev

Item 2: Instrument status

- Terra and Aqua MODIS are in nominal operations.
- Aqua Drag Make-up Maneuver (DMU #36) successfully executed on 2008/339. Low fidelity pointing times are from ~14:52:00-15:54:10.
- Aqua data loss due to ground station contact errors. Times of loss are 2008/344 23:21:27 to 2008/345 00:32:45 (Dec 9 & 10). FOT checking for exact loss times and to discern if any data is recoverable from DB.

Item 3: MCST recent activities

- Baseline Collection 6 LUTs delivered to L1B. Current information calls for the commencement of science testing in January. James will check for any updates to that schedule. MCST has been checking the test granules and will deliver a second v6 LUT package to L1B to address several minor issues identified since the baseline delivery.
- Aqua EOPM review (End of Prime Mission): Vince, Jack, Bill and Brian attended the meeting last week with Vince, Jack and Robert Wolfe presenting material regarding the status of MODIS. The initial response of the review panel was very positive regarding the performance of the Aqua spacecraft and its instruments. Jack will share the overview and lessons learned package with the group.
- Terra noisy detectors: B27 D2 & B30 D1: An anomaly was previously reported (9/24/08 MsWG) of a SAA related NEdT increase for all PV detectors on the LWIR FPA. It first appeared as a peak in NEdT coinciding with the two orbits passing through the SAA beginning about day 2008/247 (Sept. 3). Bands 27 and 30 showed the largest impact. This behavior has slowly grown over the last few months and as of day 343 the NEdT jumps to the higher level every orbit during passage over the South Pole region and slowly decreased over the orbit. For the consecutive orbits that pass directly through the SAA, the NEdT levels remain high throughout the entire orbit. This pattern of behavior is similar (but of different magnitudes) for bands 27-30. Scan-by-scan analysis of NEdT shows that for any granule during these increased noise periods, greater than 20% of scans are out of specification for B27 D2 and B30 D1 – two detectors currently considered 'normal' in the QA. The impact of this noise is observable in production L1B images. MCST proposed a QA status update to 'noisy' for these 2 detectors. All present agreed on this decision. The exact cause of this anomaly was discussed with no conclusion. MCST will perform additional analysis to investigate a root cause.
- The QA status of Aqua B6 D4 was discussed. Currently flagged as noisy, it has shown trends that indicate it can be considered as 'normal'. It was decided to not change the QA flag.

Item 4: Around the Table

- Gerhard requested that MCST produce a reprocessed RVS LUT for Aqua band 8, recalculating using the SRCA data in the analysis, starting from the beginning of 2007. This would be helpful to investigate some AOI artifacts observed in the water leaving radiance products. Junqiang will produce this special LUT for the Ocean Color group.

- Bill asked a follow up on the Aqua FPA cooler margin issue discussed at the previous MsWG – to what level have we lost the margin? Currently, the SMIR FPA cannot be controlled over the entire orbit at its set point of 83 K. During the dayside, the control is lost and the temperature slowly rises to ~83.15 K and then falls back to 83 K on the nightside during every orbit. This behavior is expected to grow over time. MCST is monitoring this and will derive an updated estimate of the rate of increase after the next seasonal cycle reaches its peak. An impact assessment is in progress to inform the science team as to what to expect and options for mitigation.

Next Meeting: ~January 7, 2008